

IN THE CLAIMS

Please cancel claims 1-16, 18-19 and 25-26, amend claims 17, 20 and 24, and add new claims 27-34 as follows:

1-16. (CANCELED)

17. (CURRENTLY AMENDED) A method of creating a (B, Al, Ga, In)N [[based]] light emitting diode (LED), ~~wherein light from an emitting layer is extracted through a structured surface of a nitrogen face (N-face) of the LED,~~ comprising:

fabricating ~~one or more layers~~ at least an n-type layer, an emitting layer and a p-type layer of the (B, Al, Ga, In)N [[based]] LED on a substrate;

exposing a nitrogen face (N-face) surface of the n-type layer [[s]] by removing the substrate from the layers; and

~~structuring the surface of~~ etching the N-face surface of the n-type layer after the substrate is removed to create a plurality of cones having a size not smaller than 200 nm to enhance increase extraction efficiency of light from the emitting layer out of the N-face surface as compared to the N-face surface without the cones.

18. (CANCELED)

19. (CANCELED)

20. (CURRENTLY AMENDED) The method of claim 17, wherein the N-face surface of the n-type layer is ~~structured~~ etched using an anisotropic etching.

21. (PREVIOUSLY PRESENTED) The method of claim 20, wherein the anisotropic etching is a dry etching.

22. (PREVIOUSLY PRESENTED) The method of claim 20, wherein the anisotropic etching is a wet etching.

23. (PREVIOUSLY PRESENTED) The method of claim 22, wherein the wet etching is a photo-enhanced chemical (PEC) etching.

24. (CURRENTLY AMENDED) The method of claim 17, wherein the etching of the N-face surface ~~of the N-face is structured by~~ comprises roughening or patterning the N-face surface.

25-26. (CANCELED)

27. (NEW) The method of claim 17, wherein the etched N-face surface reduces light reflections occurring repeatedly inside the LED, and thus extracts more light out of the LED.

28. (NEW) The method of claim 17, wherein the substrate is removed by a laser lift off (LLO) technique.

29. (NEW) The method of claim 17, wherein the substrate is a c-plane GaN wafer.

30. (NEW) The method of claim 17, wherein a p-type electrode is fabricated on the p-type layer and the p-type electrode has a property of high reflection to decrease light absorption and to increase light reflection toward the N-face surface of the n-type layer.

31. (NEW) The method of claim 17, wherein an n-type electrode is fabricated on the n-type layer and a current-blocking layer is aligned under the n-type electrode to keep current from concentrating below the n-type electrode, so that absorption of the light under the n-type electrode can be avoided and extraction efficiency of the light can be increased.

32. (NEW) The method of claim 17, wherein the LED includes a current-confining frame made of an insulator to restrain leakage current through the sidewalls of the LED without significantly decreasing an emitting area.

33. (NEW) The method of claim 17, wherein the cones are hexagonal shaped cones that have an angle equal to or smaller than:

$$2\sin^{-1}(n_{\text{air}}/n_s)$$

where n_{air} is a refractive index of air and n_s is a refractive index of the n-type layer.

34. (NEW) The method of claim 17, wherein the cones are hexagonal shaped cones that have an angle equal to or smaller than:

$$2\sin^{-1}(n_{\text{enc}}/n_s),$$

where n_{enc} is a refractive index of an epoxy deposited on the etched N-face surface and n_s is a refractive index of the n-type layer.